

RUBBER
manufacturers
association

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January 31, 2006

Dr. Alan Lloyd, Chair
California Environmental Protection Agency
1001 I Street
Sacramento, CA 95812-2815

Dear Dr. Lloyd:

On behalf of the members of the Rubber Manufacturers Association (RMA),¹ I am pleased to offer comments related to the Climate Action Team Draft Report to Governor Schwarzenegger regarding recommended approaches to achieve the goals outlined in Executive Order S-3-05, which sets greenhouse gas emissions reduction targets for 2010, 2020 and 2050 ("Draft Report").

RMA represents a \$26 billion domestic tire manufacturing sector in regulatory proceedings, legislative issues, and the development of technical standards. RMA also assists its members in educating government officials and other stakeholders about technical aspects of tire manufacturing. RMA member tire companies operate 36 manufacturing facilities in 18 states. RMA estimates that its tire manufacturer members represent nearly 100 percent of the original equipment tire market and over 90 percent of the replacement tire market in the passenger and light truck categories.

The tire industry is committed to working with the California Energy Commission (CEC) to create a meaningful consumer information and rating system program on the energy efficiency of replacement tires. The tire industry began to participate in discussion in California in September 2002, when the California Energy Commission (CEC) began to conduct research pursuant to Senate Bill (SB) 1170. Since that time, the tire industry has weighed in during the development of Assembly Bill (AB) 844 in 2003, and continually worked with the CEC staff as they work to implement AB 844.

While the tire industry recognizes that tires do have a role to play in the vehicle fuel economy debate, it is premature to assign a climate change reduction figure (in CO₂ equivalents) to the ongoing regulatory development under AB 844. The Draft Report states in Table 3.1 on page 15 that "fuel efficient replacement tires and inflation programs" would

¹ The RMA is the national trade association representing more than 100 companies that manufacture various rubber products. These member companies include every major domestic tire manufacturer including: Bridgestone Americas Holding, Inc.; Continental Tire N.A.; Cooper Tire & Rubber Company; The Goodyear Tire and Rubber Company; Michelin North America, Inc.; Pirelli Tire North America; and Yokohama Tire Corporation.

lead to 1.5 million tons of reductions in CO₂ equivalent. This figure is unsubstantiated and does not reflect the current status of the regulatory development work at CEC.

REQUIREMENTS OF AB 844

The Draft Report outlines the requirements of SB 1170, which were completed in early 2003 and briefly mentions AB 844, which was enacted in 2003. However, the Draft Report incorrectly implies that AB 844 merely "later required tire manufacturers to report to the Energy Commission the rolling resistance and relative fuel economy of replacement tires sold in California." On the contrary, AB 844 required the CEC to undertake a major rulemaking with two separate components that have yet to be completed or implemented.

California AB 844 mandates that the CEC create a replacement tire efficiency program. This program consists of two main components: (1) a tire efficiency rating system and reporting requirements and (2) the development of minimum efficiency standards. The first set of requirements – test method, rating system and reporting requirements – was set to be completed by July 2006. However, administrative challenges, including the Governor's freeze on administrative actions in 2004, have caused this process to fall behind schedule. CEC staff have stated publicly that the formal rulemaking will commence by February 2007 and conclude by February 2008.

The second set of requirements under AB 844, minimum tire efficiency standards, must be technically feasible and cost effective to the consumer, cannot adversely affect tire safety, cannot not adversely affect average tire life, and cannot not adversely affect the state's scrap tire program. This second set of requirements were due to be completed in July 2007 and implemented in July 2008. However, this regulatory development is likewise behind schedule, and no public statements regarding a revised timeline have been made.

CEC STATUS OF AB 844 IMPLEMENTATION

The tire industry applauds the CEC for charting the course to conduct a thorough investigation of the relevant technical aspects. However, the CEC process is far from complete. In 2005, CEC initiated a \$400,000 tire testing program pursuant to AB 844, using Smithers Scientific, a testing firm with significant tire expertise. CEC is assessing test methods for measuring rolling resistance, testing over 100 tires for rolling resistance to establish a database of rolling resistance values for various original equipment and replacement tires and studying the relationships among rolling resistance, fuel economy, traction and tread wear. The CEC study will provide crucial information to better inform this process and policy makers on the issues and tradeoffs surrounding tire rolling resistance and vehicle fuel economy.

Smithers and CEC continue to collect testing data under their contract. However, no publicly-available conclusions have been drawn based on testing conducted to date. The current CEC contract with the third-party tire test laboratory is due to continue through 2006. According to public statements, CEC staff do not plan to initiate the formal

rulemaking process on the first phase of the AB 844 requirements until February 2007. An anticipated schedule for the second phase of the AB 844 requirements has not been publicly released.

NAS STUDY ON TIRE EFFICIENCY NEAR COMPLETION

On the Federal level, by direction of the U.S. Congress, the National Highway Traffic Safety Administration (NHTSA) has commissioned the National Academy of Sciences (NAS) to determine if the potential for fuel savings from lower rolling resistance in tires outweighs the environmental and safety impacts that result from the effects on other tire performance parameters. The study is scheduled to be delivered to NHTSA by March 31, 2006 and submitted to Congress upon NHTSA's approval thereafter.

In order to complete the study, the NAS Transportation Research Board convened a panel of experts in the areas of tire design and performance, fuel economy, vehicle dynamics, economics and other related disciplines. The Committee assessed the available information in the public domain, including peer-reviewed scientific literature, information submitted during the process and government data. The Committee held four public meetings during 2005, including two in California. RMA, CEC the California Integrated Waste Management Board (IWMB), the Natural Resources Defense Council and other interested stakeholders participated in the NAS meetings and process.

This process evaluated the state of the art with respect to tire rolling resistance, vehicle fuel economy and other tire performances. Upon completion, the study report also will provide policymakers with additional critical information upon which to make informed policy choices and assess whether it is technically feasible and cost effective to set tire efficiency standards regulating rolling resistance performance without compromising tire safety or tire wear performance of replacement tires.

WHAT IS ROLLING RESISTANCE?

Tire energy efficiency, commonly referred to as tire "rolling resistance," contributes to vehicle fuel economy. Vehicle fuel efficiency is affected by many different vehicle components. According to the U.S. Department of Energy, only about 15% of the energy in the fuel that goes into a car's gas tank is used to move a car down the road or use other valuable components, like power steering. The largest cost to vehicle fuel energy, 62%, is lost to engine friction, and other related engine losses. Just idling at stoplights or in heavy traffic loses seventeen percent. In contrast, on the order of 4% is lost to tire rolling resistance.

How do improvements in a tire's rolling resistance translate into potential fuel economy savings? A 5 to 10% improvement in rolling resistance equates to about a 1% improvement in fuel economy depending on a number of factors. In turn, the rolling resistance of a tire is influenced by many factors. These factors include tire inflation pressure, load and speed of the vehicle, tire condition, environmental and road conditions

and tire design. When tires are designed to maximize lower rolling resistance, the performance of wet and dry traction is reduced. When a tire is designed to maximize traction, rolling resistance increases.

Improving tire rolling resistance requires physical changes in tire design that in turn lowers the mileage expectancy of tires. If lower rolling resistance tires were mandated, the number of scrap tires created per mile driven would increase, thus exacerbating scrap tire management issues. There are well understood relationships among rolling resistance, traction and tread wear. These relationships have been illustrated in analysis presented by the tire industry and NAS. One characteristic cannot be maximized without affecting the others.

Above all, tire safety must be preserved. Tire manufacturers will never maximize tire rolling resistance performance in a way that compromises tire safety. However, rolling resistance improvements do have traction performance implications. Consequently, the relationship between rolling resistance and safety performance must be represented by data in order to avoid setting a standard that would in essence require unsafe traction levels. This type of standard would not be in the public interest and would not be technically feasible, since tire manufacturers would be unable to manufacture compliant tires.

The tire industry believes that all aspects of tires should be considered when considering energy efficient tires. As described above, significant activities are underway both by the state of California and the National Academy of Sciences that will greatly enhance the state of knowledge regarding tire rolling resistance and enable decision makers to understand the potential consequences of setting minimum tire efficiency standards. In a recent report on vehicle fuel economy, The National Academy of Sciences said it best: "Continued advances in tire and wheel technologies are directed toward reducing rolling resistance without compromising handling, comfort, and braking. Improvements of about 1 to 1.5% are considered possible. *The impacts on performance, comfort, durability, and safety, however, must be evaluated.*"

RMA IS COMMITTED TO PROMOTING SOUND SCRAP TIRE MANAGEMENT

The tire industry is sensitive to the need to assist in promoting environmentally and economically sound end-of-life management, reutilization and disposal practices for its products. Of course, in the hierarchy of reduce, reuse, recycle, source reduction is always the initial consideration. The relationship between rolling resistance/vehicle fuel economy and tire mileage expectation/scrap tire generation, then, must be a focus during public policy development, so as to avoid any unintended consequences in setting tire efficiency requirements.

AB 844 recognizes this by tasking the IWMB with a consultation role in the implementation of the legislation. Further, the IWMB provided the funding for the CEC tire testing program currently underway. RMA and the IWMB share goal of ensuring that

a potential tire efficiency program does not increase the scrap tire generation rate in California. RMA actively participates in IWMB activities as a stakeholder.

As part of the tire industry's continued commitment to the concept of shared responsibility for the disposition of its products, RMA's scrap tire management mission is to promote the environmentally and economically sound management and use of scrap tires. RMA's strategic goals are to promote the elimination of all scrap tire piles; promote sound management of all annually-generated scrap tires; seek public awareness of scrap tire management successes; and advocate for a legislative and regulatory environment that is conducive and supportive of its mission.

Additionally, RMA provides technical and policy information regarding several areas of scrap tire management and hosts regional, national and international and scrap tire conferences for state and federal regulators. RMA does not represent nor have any vested interest in the processing of scrap tires or in any product derived from scrap tires. RMA promotes the concept that scrap tires are a resource that can be used in a wide array of applications.

The tire industry has long been committed to achieving sound scrap tire management laws, regulations and markets. In 1989, the RMA member tire manufacturers created the Scrap Tire Management Council (STMC), a non-profit advocacy organization that operated as part of RMA. Today, RMA scrap tire-related activities are directed by the RMA Scrap Tire Committee, comprised of representatives of the seven major tire manufacturers, and managed by the RMA Environment and Resource Recovery Department.

RMA publishes a comprehensive scrap tire market report on a biennial basis. This report presents U.S. scrap tire market data, analyzes the various scrap tire U.S. markets, discusses the history and current trends in U.S. scrap tire management and presents data quantifying the number of scrap tires in stockpiles in the U.S. RMA is recognized for its expertise and leadership in the scrap tire management field.

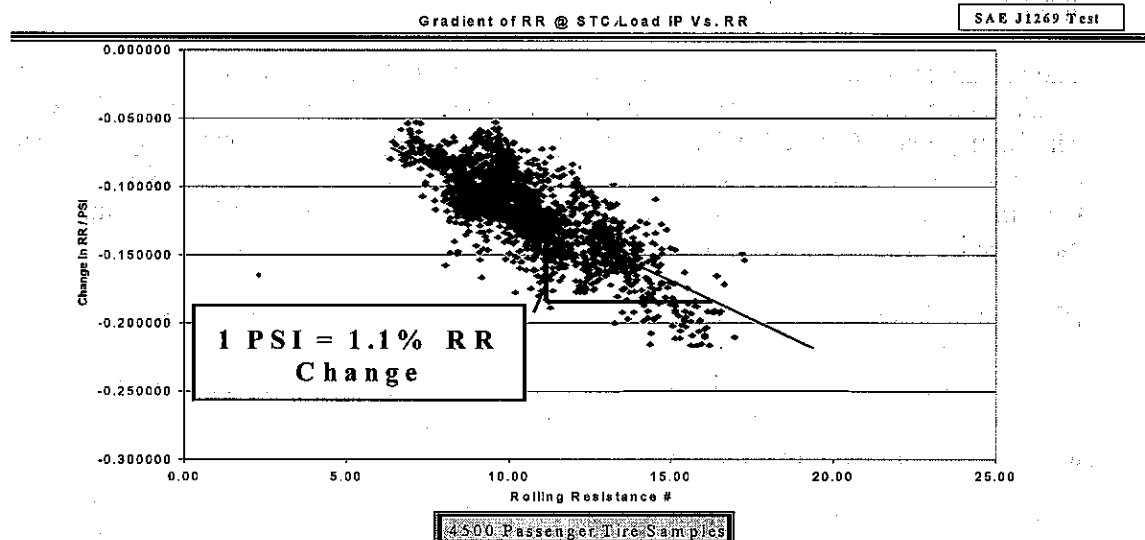
The most recent RMA report, U.S. Scrap Tire Markets: 2003 Edition, was published in July 2004 and is attached to these comments. RMA is preparing to collect 2005 data for its next volume, which is expected to be available later this year. For the 2005 edition, RMA is working in partnership with the U.S. Environmental Protection Agency (USEPA) Resource Conservation Challenge² to ensure that the data collected is the most comprehensive and completed ever collected.

² The RCC is a voluntary program established by the U.S. Environmental Protection Agency in 2002 to develop new and flexible ways to address solid waste issues. Stakeholders involved in the RCC Tires Partnership include EPA headquarters and various EPA Regions, several states, the Federal Highway Administration, the tire industry, the cement industry, recyclers and other interested parties. The RCC is described in more detail in the attached scrap tire markets report and on EPA's website at <http://www.epa.gov/epaoswer/non-hw/muncpl/tires/basic.htm>.

TIRE MAINTENANCE PLAYS A KEY ROLE IN FUEL ECONOMY

The Draft Report correctly identifies tire inflation and maintenance as a key option to improve tire efficiency. RMA welcomes an active and robust partnership with California to develop and conduct a tire care and maintenance public education campaign. Proper tire inflation pressure plays a crucial role in achieving lower rolling resistance and good vehicle fuel economy.

In fact, tires that are only 5 to 7 psi underinflated can increase fuel consumption by 10 percent. A National Highway Traffic Safety Administration (NHTSA) study found that 27 percent of cars and 32 percent of light trucks in the U.S. have at least one significantly under inflated tire (8 psi). Even the best tire fuel efficiency program can only hope to accomplish a slight reduction in rolling resistance. Encouraging motorists to keep their tires properly inflated could have a far greater impact on fuel economy.



Low tire inflation pressure and heavy vehicle load negatively affect rolling resistance by increasing deflection and distortion of the tire. RMA data shows that tire inflation pressure plays a key role in a tire's rolling resistance. Illustrated above, when a tire is under inflated by 1 pound per square inch (psi), the tire's rolling resistance is negatively affected by approximately 1.1 percent. This negative effect on rolling resistance in turn lowers vehicle fuel economy. The ratio between rolling resistance and fuel economy is dynamic and it depends on several other factors including vehicle type and load, road and environmental conditions, etc. However, a typical range for light duty (4-wheel) vehicles would be 5-8 percent deterioration in rolling resistance performance, which equals a one percent reduction in fuel efficiency.

RMA INVITES CALIFORNIA TO JOIN PUBLIC EDUCATION CAMPAIGN

RMA is committed to a multi-million dollar, multi-year education campaign to increase public awareness about proper tire maintenance. The campaign "Be Tire Smart – Play Your **PART**" focuses on four important tire maintenance activities – Pressure, Alignment, Rotation and Tread. Originally designed to promote tire safety, the RMA campaign also promotes concepts that would achieve environmental benefits. Maintaining proper tire inflation pressure, in particular, will help to promote improved fuel economy and longer tire life. Key factors in the longer tread life equation are proper inflation and proper alignment, both of which promote even tread wear and longer tire life.

RMA has many partners in its campaign that provide valuable avenues for sharing the tire safety message with the public. Among those partners are AAA, tire dealers, auto dealers, and associations nationwide. In addition, NHTSA has its own tire safety campaign that shares a message consistent with RMA's called "What's Your PSI?"

RMA sponsors National Tire Safety Week as an initiative of RMA's "Be Tire Smart – Play Your **PART**" program. The fifth annual National Tire Safety Week will be held April 23-29, 2006. Participation in National Tire Safety Week has grown steadily since the first event in 2002. In 2005, more than 12,000 tire and auto dealer outlets distributed free RMA tire care brochures. Additionally, many retailers incorporated National Tire Safety Week in advertising and promotions, held events to check motorists' tire pressure for free, and promoted tire care and maintenance to local media.

As part of National Tire Safety Week, RMA also sponsors radio public service announcements (PSAs). In 2005, IWMB Board Chair Rosario Marin recorded PSAs that were broadcast in English and Spanish throughout California. The PSA was aired nearly 6400 times on 102 stations.

The key benefits of the RMA campaign include the fact that it can be implemented immediately. RMA has repeatedly offered to make available to California materials for its use in developing a campaign for the State. Its effects do not require consumers to buy new tires, or in fact spend any significant money. Consequently, greater public awareness about proper tire maintenance has the potential to have a far greater impact on fuel economy than any rolling resistance program would.

CONCLUSIONS

RMA believes that it is premature to assess the potential for CO₂ savings in California from tire efficiency programs, since regulatory development is ongoing to implement AB 844 and relevant data are not yet available. RMA urges California to continue down the path set out by the CEC to collect reliable scientific data, fully assess opportunities and potential environmental trade-offs and conduct a robust and transparent rulemaking. RMA is committed to active participation in this process and believes this is the way to establish reasoned, sound public policy. RMA also encourages the Climate Action Team to make

publicly available the assumptions used to craft the estimates associated with tire efficiency so that stakeholders have the opportunity to provide input to the process.

As well, RMA reiterates its invitation to California to become an active partner in our tire maintenance public information campaign. Through public-private partnerships, we can make strides toward educating the public about important tire safety issues and the associated environmental benefits.

Please contact me if you or your staff have questions, require further information or would like to join us in our tire maintenance education efforts, including the upcoming National Tire Safety Week.

Sincerely yours,



Tracey J. Norberg
Vice President and Deputy General Counsel

- Attachments:
- (1) RMA Scrap Tire Markets: 2003 Edition
 - (2) RMA "Be Tire Smart Play your Part" brochure
 - (3) RMA "Tire Care and Safety Guide" brochure
 - (4) NHTSA "What's Your PSI?" brochure
 - (5) NHTSA "Tire Safety Everything Rides on It" brochure